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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,716	08/19/2003	Norihisa Sasano	4041K-000147	5122
27572	7590	06/16/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			SWENSON, BRIAN L	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	

3618

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/643,716	Applicant(s) SASANO ET AL	
	Examiner Brian Swenson	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/30/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,058,558 issued to Ueda et al.

Ueda et al. teaches in Figures 1-16 and respect portions of the specification of a: vehicle front end structure comprising; an axial flow fan (52) having, in turn, a rotating shaft which extends in a longitudinal direction of a vehicle (see Figure 2) and adapted for supplying cooling air to a radiator (51); an intercooler (17; Figure 1) for cooling air drawn into an internal combustion engine; and an air cleaner (13), provided on a downstream side of an air flow relative to an inlet (26; Figure 1) from which air drawn into the internal combustion engine is introduced, for removing dust in the air so introduced, wherein the inlet is positioned opposite to the intercooler across the axial flow fan as viewed in the longitudinal direction of the vehicle (Figure 1), wherein the air cleaner is positioned at a location where the air cleaner deviates from the intercooler as viewed in the longitudinal direction of the vehicle (Figure 1), and wherein the axial flow fan rotates in a direction which deflects an air flow blown out of the axial fan to an intercooler side (air will be blown to the left side of inter cooler 17 as viewed in Figure 2).

In regards to claim 4, see Figure 2 of Ueda et al. where radiator (51) is shown parallel to fan (52).

In regards to claim 5, Figure 2 of Ueda et al. shows the fan is (52) located rearward of radiator (51) and obstacle (53) interrupts the flow of air rearward of the fan.

In regards to claim 6, Ueda et al. shows the inlet (26) is opens on an opposite side of the intercooler.

In regards to claim 7, Ueda et al. shows the axial fan will rotate to direct air rearwards toward the engine of the vehicle, by inspection Figure 2 shows the intercooler (17) is placed in front of the fan and therefore in front of the axial flow.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al., as disclosed above in reference to claims 1 and 4-7.

Ueda et al. discloses the claimed invention including showing a bell-mouth air guide (26) for guiding air in front of the vehicle to the intercooler (see Figure 1 where air enters the bell-mouth flows through elements (3,13,13,22,15,16) and enters intercool (17). Ueda et al. shows in Figure 2 the bell-mouth inlet (26) positioned above the radiator (51) but does not explicitly state if the bell-mouth is fastened on a radiator support or is made integral with the support. It would have been obvious to one having

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ordinary skill in the art at the time of invention to fasten the bell-mouth inlet to the radiator support to provide a secure mounting point to prevent vibration in the tubing line. It would have been obvious to one having ordinary skill in the art at the time of invention to form the bell-mouth inlet integrally with the radiator support, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,702,079 issued to Saito et al. shows in Figure 1 an inter cooler (30) positioned opposite an air cleaner (24).

U.S. Patent No. 5,448,982 issued to Arakawa et al. shows in Figure 1 an intercooler (28) positioned opposite an air cleaner (17) located rearward of a fan (11) and radiator (12).

U.S. Patent No. 4,744,411 issued to Lohmann shows a mounting arrangement for an intercooler.

U.S. Patent No. 5,358,304 issued to Kanemitsu et al. shows an intercool (51) positioned in the front end of a vehicle.

U.S. Patent No. 6,357,541 issued to Matsuda et al. shows a cooling arrangement for the rear of a vehicle, in Figure 1.

U.S. Patent No. 5,711,387 issued to Murata et al. shows an engine cooling system.

U.S. Patent No. 4,610,326 issued to Kirchweger et al. teaches of an air cooling arrangement.

U.S. Patent No. 6,035,955 issued to Suzuki et al. teach of a front engine compartment structure.

U.S. Patent No. 5,427,502 issued to Hudson teaches of a fan shroud assembly.

U.S. Patent No. 5,551,505 issued to Freeland teaches of an air flow pattern for an engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Swenson whose telephone number is (571) 272-6699. The examiner can normally be reached on M-F 9-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Swenson

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Examiner  
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SUPERVISORY PATENT EXAMINER  
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